

**WSDOT Wetland Bank
Oversight Committee (BOC)
Teitzel Bank Site Meeting
November 26, 2001
9:00 am-4:00 pm
Large Commission Board Room
WSDOT Headquarters**

Final Meeting Minutes

Attendees:

Barb Aberle	WSDOT
Heather Roughgarden	WSDOT
Noah Herlocker	WSDOT
Bill Leonard	WSDOT
Dan Corlett	WSDOT
Lauren Driscoll	Department of Ecology
Brad Murphy	Department of Ecology
Gail Terzi	Army Corps of Engineers
Anne Robinson	Army Corps of Engineers
Dave Martin	Army Corps of Engineers

Action Items

1) Concurrence points: Accept or recommend modifications needed for acceptance (terms highlighted on pages 5 and 6)

2) Draft meeting minutes: Acknowledge that this document provides a clear and accurate record of the discussions and decisions that took place at the BOC meeting on 11/26/2001

Goal of Meeting

The goal of this meeting was to reach consensus on as many issues as possible in regards to the Teitzel Bank Instrument. This meeting attempted to focus, specifically, on the credit release ratios and the credit release schedule with some attention given to the development of appropriate performance measures.

Opening Discussion

Process overview

Bill Leonard began the meeting by running through a review of the steps involved in the BOC decision-making process with emphasis on where we are at and what steps lie ahead. A Gantt chart and a flow chart were distributed to facilitate this discussion. Issues still needing to be resolved, not including issues that received concurrence during the course of this meeting, include:

- Agreement on the credit release format and schedule
- Performance objectives
- Standards of success.

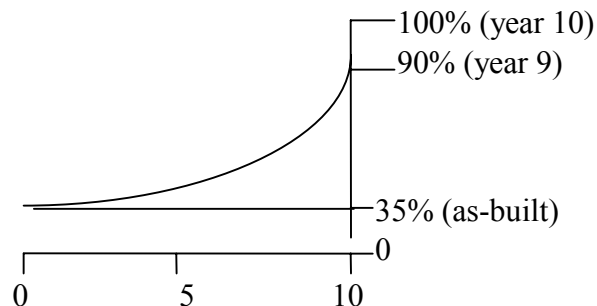
General Discussion

- Dave felt that the Teitzel Bank Oversight Committee decision process must be in accordance with the Federal Corps Banking Guidance. Bank instrument must be tied to a permit action in order for the Corps to enforce
- Corps needs to have a public comment period. This would require an abbreviated bank instrument (prospectus) containing approximately 5-6 pages of text and about 2 graphics. The Corps will tie this to the Nationwide 27 permit. The Corps members will lay out this process at the next meeting.
- Initial credit release (35%) will be established by meeting performance measures that relate to as-built conditions. Several of the activities will bring immediate functional lift (removing fill and drain tiles) and thus meet performance measures at as-built.

Credit release options

Lauren introduced the Dennis King paper, *Costs of wetland Restoration* (1994). The paper discusses a legally defensible method for determining credit ratios and release schedules based on 1) the level of functional replacement provided, 2) the speed at which functional replacement is provided, and 3) the risk that the compensation wetland will not perform as expected. Based on this, Lauren discussed the following 3 potential options for setting up a credit release schedule:

1. Using an environmental economist, develop a graph of relative ratios with time on the *x* axis and percentage of maximum available credits on the *y* axis. The increased ratios represented by the *y* axis, would be hinged upon successfully meeting performance measures set for every 2 years. This option, though complex, would allow for more flexibility in use of the Teitzel bank site.



2. Tie set ratios with years between 1 and 10 contingent upon performance measures for those years. Numbers used in table below are for example only.

Year	Ratio
1	3:1
3	2:1
10	1:1

3. Assign a multiplier to each year and use this multiplier to adjust base ratios for that year (numbers provided are for example only):

Year	Multiplier
1	2(1:1)
3	1.5(1:1)
10	1:1

Teitzel Bank Instrument Discussion

Definition of Mitigation types at Teitzel

Dan Corlett described the updated Teitzel restoration map that was distributed at the meeting. The map displayed the different areas associated with the 8 distinct types of mitigation activity. For each activity area (itemized below) a definition of the mitigation and the total acreage associated with that activity was provided. These definitions were derived directly from a table of definitions that the BOC had reached concurrence on at the last meeting. The following is a list of those definitions:

1. Wetland Restoration - Removal of fill from historic wetland(s).
2. Wetland Enhancement Type I - Excavation of long-duration seasonal pond habitat.
3. Wetland Enhancement Type II - Disabling of drain tiles.
4. Wetland Enhancement Type III - Tree planting in degraded wetland areas (i.e. agricultural fields).
5. Wetland Enhancement Type IV - Under planting of trees.
6. Stream Enhancement - Willow staking along the North Fork Newaukum and Newaukum River.
7. Upland Buffer Enhancement - Tree planting in degraded upland buffer areas (i.e. agricultural fields).
8. Riparian Enhancement - Tree planting in non-wetland areas either within 200' of river or low areas within 100-year flood plain.

Mitigation ratios

The BOC concurred on year 10 ratios to be used for determining the total amount of credits available within the Teitzel Bank Site. These ratios were established by mitigation activity at full success (year 10 assuming all performance measures are met). Ratios were established for debit projects involving Category II wetlands at 1 acre to 1 bank credit. Ratios for categories I, III, & IV wetlands will use a multiplier to reflect appropriately adjusted base ratios. This multiplier has not been concurred upon at this time.

A hypothetical multiplier is illustrated below for 2 acres of impact debit:

Category	Multiplier	Credits required for 2 acres of wetland impacts
I	2	4 credits
II	Base (1)	2 credits
III or IV	0.66	1.33 credits*

** When using this multiplier it is important to note that "credits" represent multiple acres of enhanced, restored, and preserved wetlands that have already had ratios applied to them; a trade of 1.33 **credits** for 2 acres of cat. III wetland impact is not a trade of 1.33 **acres** of wetland (more like 4-5 acres).*

Concurrence Point #1

The following table shows the acreage to credit ratios to be used for category II wetland impacts at year 10 assuming all performance measures have been met (credit maturity). The table also displays the resulting maximum credits available in the Teitzel bank using these ratios:

Mitigation activity	Total acreage	Conversion rate at full-term	Resulting credits (max.)
Restoration	0.53	1:1	0.53
Enhancement Type 1	4.26	1.2:1	3.55
Enhancement type 2	21.41	1.5:1	14.27
Enhancement type 3	63.33	2:1	31.67
Enhancement type 4	2	5:1	0.4
Riparian enhancement	32.37	3:1	10.79
Stream enhancement	6.2	1:1	6.2
Buffer enhancement	42.15	4:1	10.54
TOTAL	172.25		77.95 (78)

In order to graph a potential curve of ratios (or % of year 10 ratios) at the various years between initial credit release and credit maturity, the group developed separate ratios to be used for year 1 (one year after as-built activities have been completed and 35% of total credits have been released) based on ratios in the existing Wetlands Implementing Agreement (July 1993) between Ecology and WSDOT. The following table is similar to the table above (1:1 impact acres/ bank credit ratio for category II wetland impacts) except that the table represents credit availability at year 1 (acknowledging that 27.3 credits have already been released and 10% of total possible credits, or 7.8 credits, are intended to be held until the tenth year).

Mitigation activity	*Ratios at yr. 1 (assuming PS met)	Resulting credits**	Range of typical concurrent ratios used by regulators
Restoration	2:1	0.15	2-3:1
Enhancement Type 1	4:1	0.585	3-8:1
Enhancement type 2	4:1	2.95	3-6:1
Enhancement type 3	4:1	8.7	4-8:1
Enhancement type 4	4:1	0.275	5-10:1
Riparian enhancement	5:1	3.56	5-10:1
Stream enhancement	5:1	4.64	10-20:1
Buffer enhancement	5:1	0.68	5-10:1
TOTAL		21.54	

**Ratios derived from Implementing agreement with Ecology*

*** These ratios have not received concurrence. They serve as reference numbers to use in developing a graph of interim credit values.*

Use of credits

Concurrence Point #2

The team identified a series of activities that would achieve functional lift immediately after construction (as-built). These activities, itemized in the table below, will allow for 35% of the 78 credits available in the Teitzel bank to be released. Thus, after regulatory agencies approve of the as-built condition of the bank site, 27.3 of the 78 possible credits will be released to WSDOT.

The remaining credits in the bank would then be worth a range of values, increasing with maturity and contingent upon successfully meeting objectives, with the potential to be worth 50.7 credits if unused prior to full maturity. The initial release of 27.3 credits is also based on category II wetland impacts. Impacts to other category wetlands would use the multiplier, which has yet to be agreed upon, to obtain adjusted ratios. The percentage of total possible credits, available for as-built conditions (35%), was determined based on the following agreed upon mitigation activity breakdown:

Mitigation Activity for initial release	% of Base Credits (Cat. II)	Credits
• Development of bank instrument and inherent value of site (preservation)	10%	7.8
• As-built activity breakdown:		
Tile breakage- 6%		4.68
Culvert removal- 1%		0.78
Culvert installation- 1%		0.78
Excavation of ponds (dynamite)- 6%		4.68
Initial plantings- 10%		7.8
Habitat structures- 1%		+0.78
• Total as-built	25%	= 19.5
• Total credits released at year 0 (as-built) 35%		27.3

Performance standards

The BOC began work on developing the goals and objectives for the site. It was decided that this is an activity that WSDOT should accomplish in-house. The following represents initial work done to identify the overall goal and the functions and values that are expected to be provided by the mitigation site (objectives). The guidance document entitled *Success Standards for Wetland Mitigation Projects- a Guideline* (Ossinger 1999) was used to assist the committee in determining the performance objectives.

Goal:

To restore forested wetland and riparian habitats, identified as limiting factors in the Chehalis watershed, to mitigate for unavoidable wetland impacts in the same watershed associated with transportation projects.

Objectives:

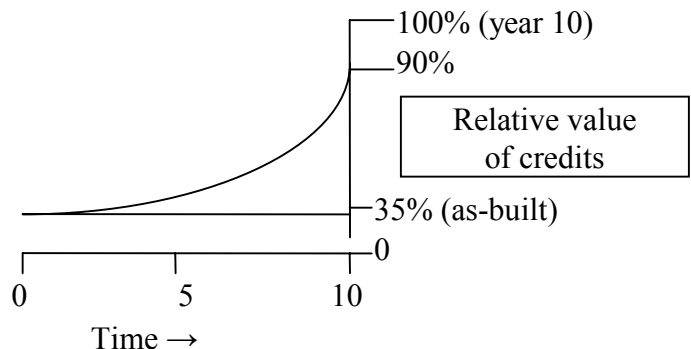
1. Restore pre-agricultural hydrology by removing drain tiles
2. Establish native forested communities
3. Improve fish and wildlife habitat on site
4. Improve habitat for wetland breeding amphibians and aquatic invertebrates
5. Change land use from agriculture to conservation in perpetuity
6. Enhance floodplain functions

Barb, Heather, Bill, and Noah will create a list of potential performance measures to be discussed at next meeting and get the list out to the BOC prior to January 10, 2002 for group review before the January 16th subsequent meeting.

Timing of credit release and amount of mitigation (credits) required for impacts

The team had further discussion on how credits would/should be released. The various scenarios presented earlier by Lauren were investigated. Due to the flexibility it would allow the agency for credit release purposes, WSDOT would prefer to graph a curve of ratios (or % of base ratios) to be established by WSDOT's environmental economist using the year 1 and year 10 ratios agreed upon by the BOC. This graph will be developed and brought to a future BOC meeting to be offered for concurrence.

Prior to the next meeting, WSDOT will develop draft mitigation ratios for credits released between yrs 0 and 10 (i.e. 3, 5, 7, 10). These ratios will become increasingly favorable as the time scale moves closer to year 10, and less favorable as the time scale



moves closer to year 0. It is expected that ratios (and standards of success) will be developed for years 3, 5, and 7.

Credit Definition: One credit (at full maturity/when PS are attained) represents the mitigation required to offset one acre of impact to a Category 2 wetland.

Next Steps

Next issues needing concurrence

- Credit release schedules
- Performance standards
- Monitoring protocol/ Maintenance plan

Action needed prior to next BOC meeting (mid-january)

- Heather/ Barb: Provide George Xu with ratios developed at this meeting and work with him to develop a formula for use of credits. Possibly invite to next meeting.
- Barb: bring in forest management literature (e.g. stem density for forest regeneration) to use during the performance standards discussion.
- Corps: Lay out the process for tying the bank instrument to a permit action
- Revise standards according to input from the 8/28/2001 BOC meeting and distribute to group prior to next meeting.
- Resource agencies: Determine whether the "free market" range of relative credit values will be acceptable as opposed to having specific ratios tied to specific years contingent upon PS for those years.

Miscellaneous Discussion topics for future meetings

- Emergent wetlands: Discussing seeding of emergent wetlands - potential for waiting on seeding to see if native colonization occurs. Could use PS to determine if seeding is necessary.
- Wetland Enhancement Type III - 4 ft. Ash whips - 200-250 an acre.
- Description of invasive species on-site.

- Habitat structures - Need to quantify amount, size, and location of woody debris and perch poles
- Question about fencing. Currently there are no plans for fencing.
- Discussion of success standards for each mitigation type
- Monitoring
- Look into Teitzel life estate and determine protection needs.